BUSINESS MODELS FOR NARCOTICS TRAFFICKING ORGANIZATIONS: A ROUNDTABLE SUMMARY

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Preface

This report represents the summary of proceedings of a Roundtable that was held at the Library of Congress on January 29, 2003. The Roundtable, *Business Practices of Narcotics Trafficking Enterprises*, was co-sponsored by the Crime and Narcotics Center and the Library of Congress Federal Research Division.

Experts from the field, representing academe, government, and the private sector, presented papers on three panels. The panels convened included modeling narcotics trafficking enterprises, how drug traffickers set prices, and case studies in narcotics trafficking business enterprises. Specialists from the Crime and Narcotics Center moderated the panels. The summary document contains a review of the welcoming and introductory comments, abstracted comments of each paper presented, and brief summary of the concluding discussion.

KEY JUDGMENTS

- Because information is limited (narcotics trafficking businesses avoid revealing operational and decision-making processes), there is a risk that the theories and models of licit businesses may be applied inappropriately to model illicit drug operations. In order to be successful, counter drug operations must look at the commonalities among business enterprises at all levels of trafficking activity.

- Drug consumption is price sensitive.

- Profit and risk are key factors in illegal enterprises. When they are in equilibrium, trafficking will remain stable. However, an increase in enforcement will raise the risk and reduce trafficking if threshold levels are crossed. If counter drug activities go beyond the threshold, increased risk will translate to higher prices, reducing demand.

- Researchers must look at the history of the drug trade to determine which organization managerial principles are operating, and to draw parallels to expansion, marketing, and distribution. Counter drug experts must understand the organizational behavior of the illegal market.

- Business modeling of narcotics trafficking organizations must be drug specific. Trafficking operations are heterogeneous and cannot be generalized. A definite crossover exists in trafficking organizations between licit and illicit activities.

- Law enforcement agencies must help producing and transit countries eliminate trafficking organizations. Reduced supply will raise prices and lower demand.

- A systematic database for collecting parallel price data from enforcement agencies in other countries would be valuable to supplement transaction-level information on price and purity in DEA's STRIDE database.

- Interdiction agencies are diverse and not well coordinated. They face enormous complexity in the narcotics trafficking business sector.

- More funding is needed for supply-side research in order to understand price setting within the source and transit zones. Agencies do not invest in policy research and do not seem to have any enthusiasm for research. Their research budgets are too limited.

- A link exists between white collar crime and legitimate business to the drug trade. Income from illegal drug trade creates excess liquidity leading to stock market and real estate bubbles. Investment opportunities are neglected in favor of short-term speculative investment. Political corruption and a culture of *laissez-faire* toward drug use foster a climate of other illegal and dangerous activity.

INTRODUCTORY REMARKS AND WELCOME

On January 29, 2003, "Business Practices of Narcotics Trafficking Enterprises: A Roundtable" was held at the Library of Congress. The meeting was co-hosted by the Library of Congress Federal Research Division (FRD) and the Crime and Narcotics Center (CNC). Dr. Robert L. Worden, Chief of FRD, welcomed the participants and guests on behalf of the Library. He noted that the research performed by FRD analysts for CNC during 2003 was a prelude to the roundtable. FRD research analysts investigated the current worldwide literature on how narcotics trafficking enterprises might be analyzed as businesses in order that policy makers may better understand how traffickers set prices, move product to market, tailor their product to the marketplace, and deal with competition. The ultimate goal of the research is to better disrupt the market and drive the enterprises out of business. The initial phase of the research produced an annotated bibliography of current research into the question.

Mr. John P. Walters, Director of the White House Office of National Drug Control Policy (ONDCP), addressed the importance of the meeting in fulfilling the Bush administration's overall drug control policy, which is to confront drug traffickers as well as to help those addicted individuals receive needed treatment. Mr. Walters noted that the problem confronting policy makers is not only a supply and demand problem: ONDCP will address all areas of the illegal narcotics trade. The efforts at education against drug use must improve, drug markets must be attacked, drug supplies must be interdicted, and treatment for addicts will improve. He pointed out that organized crime is now one of the biggest sources of drug activity and that analysts have begun to find a nexus of activity between drug trafficking organizations, organized crime, and terrorist groups. Mr. Walters summed up his remarks by charging the participants to use their experience and knowledge to help policy makers find the best means to use institutions to maximum effect to remove the threats from these dangerous trafficking organizations.

Mr. John Tidd, Acting Director of the Crime and Narcotics Center, followed Mr. Walters to the podium and also emphasized the need for the roundtable participants to examine thoroughly any business modeling techniques as they may be applied to drug trafficking organizations, the operations of price-setting mechanisms, and, subsequently, to try to apply the "lessons learned" from specific case studies to methodologies for disrupting and severely reducing the profit-making potential of drug trafficking groups.

PANEL I. BUSINESS MODELING NARCOTICS TRAFFICKING ENTERPRISES

The panel speakers were allowed ten minutes to present their findings. As a result of the time limit, many of the presentations necessarily were truncated. Interested parties will find their best source of information to be the copies of the papers submitted to the conference co-sponsors.

Peter Reuter, (University of Maryland), presented the first paper, "Do Middle Markets for Drugs Constitute an Attractive Target for Enforcement?" Mr. Reuter assessed the potential of middle market enforcement to reduce "drug problems," and found that law enforcement efforts targeted at mid-level dealers have potential for increasing drug prices when compared to efforts against high level dealers. He pointed out that the distribution of drugs essentially is brokerage: getting the commodity to market. Reuter used a classic hourglass graphic to illustrate his point. At the top are many growers, below are fewer smugglers, below that fewer still high-level dealers; then, in the bottom half of the hourglass, more mid-level dealers, still more retailers, and, at bottom, many consumers.

The author outlined some of the characteristics of mid-level organizations. These organizations are usually small and tend to deal to a small number of individuals, yet they reap significant revenues. Among mid-level dealers, there are varying degrees of commitment to the business. For some it is their sole source of income, for others it is a sideline to their legal jobs. The author noted that barriers to entry to mid-level markets are low, and individuals can easily move up from the retail level to become mid-level dealers, thereby reducing the risk and increasing their revenue significantly.

Reuter illustrated what he called the 'niche' organizations by pointing out the cocaine dealers, who, in the mid-1980s, were often lone operators who worked a small market (one example was Las Vegas, Nevada and Calgary, Alberta) with very few customers. The mid-level retailers were independent, mostly small-time dealers, who were not integrated down to the retail level. They made lots of money for not much effort and had little exposure to violence. He posited that if the relatively *few* individuals who distribute the drugs at the midlevel were removed, the effect would be to disrupt the market greatly. He suggested not worrying about the lowest- and very few highest-level dealers.

Robert Anthony, (Institute for Defense Analyses), followed Reuter to the podium to present his paper, "Farmgate-to-Street Model of Narcotics Trafficking." According to Anthony, models help experts better understand complex illegal business processes. This understanding can reveal vulnerabilities that may be used as a basis for counter-drug operations. Because of the complexity of these processes, three simplifying constraints are introduced into a model based on DEA data to facilitate the modeling through the application of mathematical scaling. These constraints are: lack of trust, competition, and threats from law enforcement.

Anthony's paper presented what he considers the most important reasons for constructing business models: to find the vulnerabilities in drug business sectors as the basis for planning counter drug operations; to understand the mechanisms by which narcotics businesses adapt to threats from counter drug activities and the changing business environment; to measure the effectiveness of supply control in order to allocate resources more effectively among various counter drug options; and to create a common framework within which diverse experiences and views may contribute to common counter drug strategies. Dr. Anthony noted that the various interdiction agencies are diverse and not well coordinated, facing enormous complexity in the narcotics trafficking business sector. Addressing that complexity was his first order of business.

Dr. Anthony reported that those who set about to model these enterprises must account for highly variable local market conditions, operating environments, and options for adaptability. He pointed out that in addition to the complexity of these businesses, law enforcement obtains only limited types of information to guide the modeling process because narcotics trafficking businesses avoid revealing operational and decision processes. As a result, there is a risk that theories and models of licit businesses may be applied inappropriately to model illicit drug operations. However, by looking at the commonalities among business enterprises at all levels of trafficking, Anthony believes that the complexity may be reduced. Among the commonalities are: lack of trust constrains horizontal and vertical integration; intense competition among traffickers (and absence of sanctions or a system of justice) causes constant fear of being supplanted by competitors; and law enforcement acts as a direct threat (seizures and arrests) and indirect threat (informants). If, as Anthony suggests, these simplifying constraints apply to trafficking organizations, one should be able to model a 'typical' trafficking enterprise. His paper presents his approach to mathematical scaling using the Drug Enforcement Agency's (DEA) STRIDE database.

Michael Lyman, (Columbia College, Missouri), followed Anthony, and presented his paper, "Business Principles of Modern Narcotics Trafficking Operations." Lyman suggested that law enforcement agencies look at the history of the drug trade to determine which organization managerial principles are operating, and to draw parallels to expansion, marketing, and distribution. He noted that new, non-traditional, organizations have entered the international drug trade. These groups (usually organized crime syndicates) often deal in contraband smuggling (cigarettes and guns), racketeering and fraud, and synthetic drugs. Although these organized crime groups generally are not narcotics producers themselves, they have cultivated ties to drug-trafficking organizations to obtain the drugs for their own distribution networks.

Lyman pointed to the 1990 study by Dwight Smith, in which Smith viewed criminal enterprises as an extension of normal business operations into the illegal market. As a result, the proper point of intervention for controlling organized crime is to understand the organizational behavior of that illegal market. Lyman also cited research by Alan Block, who, researching the cocaine trade, determined that the operations were mostly fragmented, opportunistic criminal groups, not a monolithic criminal organization.

Thomas Pietschmann, (United Nations Office on Drugs and Crime), presented his paper, "Factors to Be Taken into Account in Modeling Drug Trafficking Operations." Pietschmann's paper examined the price changes in narcotics through the application of the multiplicative price model and the additive price model. The study found that neither is able to predict the actual price of narcotics, but that the price falls between the two, leaning more towards the multiplicative model in the case of opium. This fact suggests that the additive price model is not correct in predicting price movements.

Pietschmann looked at two factors in his analysis: profits and risk (and associated protective factors, which are social capital and enabling factors), the factors making illegal activity possible in a given country. As long as profit and risk are in equilibrium, drug trafficking will remain stable. However, an increase in law enforcement activities will raise risk and, therefore, reduce trafficking once threshold levels have been crossed. Pietschmann noted, however, that most interventions occur below such threshold levels. Increased levels of risk will translate into higher prices, compensating for higher risk. He points out that higher drug prices have a positive impact on consumption because drug consumption is ‘price sensitive.’ The resulting higher profit margins are an incentive for new participants to enter the market. These new entrants may have a lower degree of risk awareness. Enforcement interventions are not futile, but one-time efforts or ‘gradual’ increases, will not lead to an end of trafficking. Pietschmann argued that in order to achieve effective reductions, interventions above the threshold level are necessary.

Pietschmann also focused on regional characteristics of trafficking, noting that generalizations about operations are difficult because worldwide operations are highly heterogeneous. Therefore, modeling must be drug specific in order to be meaningful. He also noted the increased involvement of organized crime, which poses more danger for society. Recent investigations indicate that drug trafficking is the key business activity for more than half of the transnational organized crime groups researched. Looking at the typologies for organizational structure, he cited evidence that three-quarters of the groups investigated were found to be engaged in the legitimate economy and that there was extensive crossover between legitimate and illegitimate activities. Violence formed an essential part of the business, as well as corruption and effective political influence at the local or regional levels. According to Pietschmann, the most violent groups seem to have the most hierarchical structure.

Looking at price-setting behavior, the author considered opium in Afghanistan, and traced the movement of dry and processed opium through neighboring countries (Pakistan, Iran, Tajikistan) to Turkey and the Balkan route to Europe. Markets in the producer countries seem to operate like those for any agricultural product and are reflective of supply. However, if heroin prices remain stable or decline regardless of supply (he cited evidence of the doubling or tripling of prices in countries neighboring Afghanistan but no price increases were reported from transit countries or countries in Western Europe), then one must consider the issue of drug purity. Pietschmann argues that it makes economic sense to assist producer and transit countries with their law enforcement efforts. These measures will reduce the supply of drugs in consumer countries and help to lower demand by raising prices.

PANEL II. HOW NARCOTICS TRAFFICKERS SET PRICES

Jonathan Caulkins, (Carnegie Mellon University), presented his paper, “International Drug Prices: Evidence from STRIDE.” His presentation sought to augment open source literature on international drug prices by examining international price observations in the

DEA's STRIDE database. STRIDE is an administrative data set that has recorded acquisitions analyzed in DEA laboratories since 1977. Specifically, STRIDE records information on the type of drug acquired, the amount acquired, purity, date & location of acquisition, price paid (for a purchase), and the DEA office associated with the transaction, among other variables. Such transaction-level information on price and purity is very attractive to analysts, and the data have been used to estimate market trends, price elasticities, and a variety of other uses. The results are found generally to be consistent with conventional reporting of these prices. Some evidence of quantity discounts and price markups is found in source and transshipment countries.

Most of the principal illicit drugs used in the United States are produced overseas; so international markets for these substances bear on U.S. drug availability, prices, use, and consequences. Prices are a key characteristic of these markets, but international drug price information in the open literature primarily consists of summary or representative figures cited in official publications. For example, Caulkins found that STRIDE price data are much scarcer outside the United States than within, making quantitative analysis of international prices difficult. He suggested that it might be valuable to create some systematic database for collecting parallel price data from enforcement agencies in other countries and/or price quotes for individual transactions overheard by wiretaps or other sources to allow better monitoring of international prices.

William Rhodes, (ABT Associates), presented his paper, "How Narcotics Traffickers Set Prices," in which he presented some basic algebraic equations to represent how the prices of narcotics are set. The equations illustrate how a monopolist drug dealer at the retail level and the source level would set prices. In order to maximize profits, the source-level monopolist sets the marginal revenue from street sales equal to the sum of the marginal cost at each distribution level. The monopolist determines the amount sold, X, which maximizes the distribution system's profits, all of which are absorbed by the monopolist. Given the demand curve, this factor determines the price on the street. However, Mr. Rhodes emphasized that price is not based on cost, but on demand. In order to affect prices and improve enforcement, counter drug agencies must learn how to influence demand. Law enforcement authorities must get control over the downstream buyers.

Rhodes' schema reflects how prices are set in the source area, transit zone, and elsewhere in the distribution system. However, complications to this simple model exist. A couple of these complications are the possibility of monopolistic power existing on more than one level of the distribution chain, and the considerable information that the monopolist must possess in order to implement the calculation described above.

The author cites the findings from a number of studies by ABT Associates, including ones to measure the deterrent effect of various enforcement operations and the impact on retail and wholesale prices. Mr. Rhodes concluded by proposing that increased funding for more supply-side research is necessary in order to understand price setting within the source and transit zones. Mr. Rhodes concluded his presentation stating that enforcement agencies do not invest in policy research, do not seem to have any enthusiasm for research, and have limited research budgets.

Siegfried Kammhuber, (EUROPOL), presented his paper, "The Development of Drug Prices and the Current Drug Price Situation within the European Union," in which he focused on the wholesale prices for cocaine, hashish, brown heroin, and MDMA within the EU. Mr. Kammhuber noted that cocaine is smuggled into the EU primarily from Colombia, with Antwerp serving as a point of entry. Since 1998 the EU-wide wholesale price of cocaine has remained essentially stable. Hashish is smuggled into the EU primarily from Morocco via Spain. EU law enforcement seized more than 665,000 kg of hashish, valuing more than €1 billion. The EU-wide wholesale price decreased by almost 12 percent. Eighty percent of heroin entering consumer markets in the EU originates from the Pashtun area of Afghanistan. EU law enforcement seized approximately 7,000 kg, valuing less than €200 million. Compared to 1998, the EU-wide wholesale price of brown heroin decreased by almost 19 percent.

Ecstasy is increasingly produced in EU countries, although there are reports that enough Piperonal-methyl-keton (PMK) is smuggled into Europe from China each year to produce 100 million tablets of MDMA. EU law enforcement seized approximately 15 million tablets, worth roughly €61 million. Although some countries report an increase in price, the EU-wide wholesale price of MDMA decreased by more than 28 percent.

Mr. Kammhuber concluded his presentation by noting the link between distance to market and price: the farther the point of entry from the source, the higher the price. He also suggested that it makes economic sense to assist source countries in their preventive and repressive measures, because these efforts will reduce the supply of drugs to destination countries and will help to lower the quantity demanded by increasing prices.

PANEL III. CASE STUDIES IN NARCOTICS TRAFFICKING BUSINESS PRACTICES

Michel Schiray, (French National Scientific Research Center), presented his paper, "Integrating Case-Studies Lessons in Business Modeling Narcotics Trafficking Enterprises," in which he pointed out that case studies of the narcotics trade show the importance of field research. Such research compensates for the lack of information available in the media and from official institutions. His report sketched an overview of the current field research that is taking place around the world, highlighting the multiple difficulties researchers face in analyzing the narcotics trade. Mr. Schiray pointed out that these studies lead to the conclusion that the drug trade is linked to white-collar crime and legitimate businesses.

Guilhem Fabre, (University of La Havre), presented his paper, "Prospering On Crime: Money Laundering and Financial Crisis," in which he examined the links between money laundering and recent financial crises around the globe. Fabre explained that the inflow of money from illegal activities such as the drug trade creates excess liquidity, leading, in turn, to stock market and real estate bubbles. Other negative impacts from the inflow of money from illegal activities include an increase in imports, a decrease in competition, and a lack of capital investment in productive and export sectors. These investment opportunities are neglected in favor of short-term speculative investments. Ultimately, the inflow of money from illegal activities can result in the deterioration of foreign trade, defaults, and devaluation of the country's currency. He cited the financial panics in Japan in the 1990s, in Russia in 1998, and in Argentina in 2002 as examples of how financial speculation may be a front for the drug industry.

Fabre raised the question of how to isolate drug trafficking from other types of organized crime, such as arms smuggling, human smuggling, vehicle smuggling, and money laundering. These crimes often begin with illegal drug activity, but imply prostitution, counterfeit goods, etc. He maintained that it is difficult to isolate the drug trade from other types of crime. Drug traffickers have other businesses as well. He cited the so-called Brazilian "coffee miracle," which turned out to be backed by cocaine trafficking.

Alan Block, (Pennsylvania State University), presented his paper, "Antigua's Crooked Swiss American Bank, Irish Drug Smugglers, and Israeli Narcotraffickers," which offered a colorful real-world example of the complex and subtle links between narcotics trafficking and other illegal ventures, such as terrorism and money laundering, as well as with legitimate businesses and national governments. The paper served as a backdrop to his discussion of the corruption and acquiescence of political leaders in furthering the abuse of illegal and dangerous narcotics. He cited several instances of active political corruption and the movement of illegal drugs through specific countries, as well as the national cultures of other countries that have a *laissez-faire* policy toward drug use. The permissive culture often fosters of climate of other illegal activity, including prostitution (in which prostitutes serve as drug "mules").

Harold Traver, (University of Hong Kong), presented his paper, "The Hong Kong Drug Business," in which he examined of the history of the drug business in Hong Kong, and then focused on the current drug situation. The author found that Hong Kong's role as a major drug transit center has declined in recent years.

Hong Kong does not produce or manufacture drugs, so drugs for use by the domestic population must be imported. Traver detailed the way each of the various drugs are imported into Hong Kong, and the organizational structures and procedures employed by the importers. As an example, the author provided details on the role and behavior of triad groups in narcotics trafficking in Hong Kong.

Traver also gave detailed information on the popularity and usage statistics for various drugs in Hong Kong. He stated that heroin continues to be the predominant drug of choice among all reported individuals; however he identified a significant increase in the popularity of ecstasy and ketamine among younger users due, in part, to the current popularity of raves and dance clubs. Cannabis too, has become more popular, while the use of Ice (crystal methamphetamine) has dropped in recent years because of the rise in popularity of ecstasy and ketamine.

Bryan Soderholm, Crime and Narcotics Center, chaired the discussion session that concluded the day's panels. Each of the panel moderators was asked to assess the issues of their respective panel and the day's discussion. In general, the participants agreed that additional research resources were needed to better assess the organization of drug trafficking enterprises and that without careful consideration of the special nature of illicit organizations, the business model could be misapplied to narcotics traffickers. Panel moderators also pointed out the need to better evaluate and assess drug purity as a variable in setting prices, raising the need for better data and assistance from worldwide drug enforcement groups. Participants generally agreed that the day's work was a good start on the effort to use innovative methods for disrupting and crippling illegal narcotics traffickers.